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TRANSMITTAL LETTER (General - Patent Pending)	Docket No. POU920000004US1

In Re Application Of: **Novaes et al.**

Application No. 09/583,677	Filing Date 05/31/2000	Examiner **Michael Young Won**	Customer No. 46369	Group Art Unit 2155	Confirmation No. 2880

Title: **METHOD, SYSTEM AND PROGRAM PRODUCTS FOR MANAGING A CLUSTERED COMPUTING ENVIRONMENT**

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Appellants' Reply Brief

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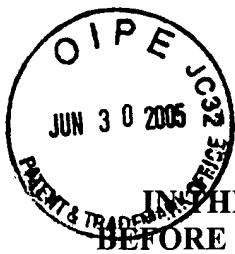
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Dated: June 27, 2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

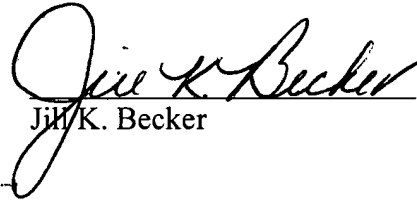|			
Appellants:	Novaes et al.	Group Art Unit:	2155
Serial No.:	09/583,677	Examiner:	Michael Young Won
Filed:	05/31/2000	Appeal No.:	
Title	METHOD, SYSTEM AND PROGRAM PRODUCTS FOR MANAGING A CLUSTERED COMPUTING ENVIRONMENT		

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Reply Brief of Appellants

This Reply Brief is being filed in accordance with 37 C.F.R. §41.41 in response to the Examiner's Answer mailed on April 25, 2005. A Reply Brief is due within two-months of the mailing date of the Examiner's Answer, which is June 25, 2005. Since June 25, 2005 is a Saturday, this Brief is being timely filed on Monday, June 27, 2005.

Appellants respectfully request consideration of the remarks provided herein.

Remarks

In the Response to Argument section of the Examiner's Answer, the following arguments were presented:

1.   With respect to independent claims 1, 27 and 51, the interdependencies being claimed by appellants are inherent in Wipfel;

2.   With respect to the separately argued dependent claims, including claims 21, 45 and 69; claims 22, 46 and 70; claims 23, 47 and 71; claims 24, 48 and 72; and claims 25, 49 and 73, the features recited therein are inherent in Wipfel; and

3.   With respect to dependent claim 76 and the combination of Wipfel and Thorbjornsen, without the combination of Thorbjornsen, the system of Wipfel would result in corrupt and unreliable shared data.

Appellants remarks address each of the above arguments in the order presented in the Examiner's Answer.

1.   Independent Claims 1, 27 and 51 – Inherency Rejection

Appellants argued the patentability of independent claims 1, 27 and 51 in their Appeal Brief, dated January 18, 2005. In particular, appellants argued that specific dependencies between particular components of the system are not described, taught or suggested in Wipfel.

In response to Appellants' Appeal Brief, an Examiner's Answer was mailed on April 25, 2005. In the Examiner's Answer, it is alleged that the explicitly claimed dependencies between the specifically recited components in appellants' claims are inherent in Wipfel. Appellants respectfully disagree.

The doctrine of inherency is well settled in patent law, and is best described in an excerpt from Hansgirg v. Kemmer, 26 C.C. P.A. 937, 102 F.2d 212, 40 U.S.P.Q. 665 (1939):

> Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [citations omitted.] If,

> however, the disclosure [of the cited reference] is sufficient to
> show that the natural result flowing from the operation as taught
> would result in the performance of the questioned function, it
> seems to be well settled that the disclosure should be regarded as
> sufficient [to anticipate the claimed invention].

Id. at 940, 102 F.2d at 214, 40 U.S.P.Q. at 667; Stoller v. Ford Motor Co., 18 U.S.P.Q. 2d 1545,

1547 (Fed. Cir. 19910; Tyler Refrigeration v. Kysor Industrial Corporation, 227 U.S. P.Q. 845,

847 (Fed. Cir. 1985); Ex parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (B.P.A.I. 1990); In re Oelrich

and Divigard, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981).

In Ex parte Levy, the court stated that "[i]n relying upon the theory of inherency, the

examiner must provide a basis in fact and/or technical reasoning to reasonably support the

determination that the allegedly inherent characteristic *necessarily* flows from the teachings of

the applied prior art." Ex parte Levy, 17 U.S.P.Q. 2d at 1464 (lengthy citation omitted) (italics

added).

As stated above, in order for a claimed feature to be inherent, it must necessarily flow

from the teachings of the applied art. The missing descriptive matter must necessarily be present

in the cited reference. In re Robertson, 169 F.3d 743, 746; 49 USPQ2d 1949, 1950-51 (Fed. Cir.

1999) (citing Continental Can Co. USA, Inc. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d

1746, 1749 (Fed. Cir. 1991)). Appellants respectfully submit that one or more of their claimed

dependencies do not necessarily flow from and are not necessarily present in Wipfel.

For example, appellants specifically recite in the independent claims that a liveness

component that provides status of one or more communications paths of a cluster is dependent

on a registry component that provides global data storage for global data of the cluster, the global

data including configuration data of multiple nodes of the cluster. Since the liveness component

is dependent on the registry component, the liveness component is reliant or contingent upon the

registry component (see, e.g., Webster's Ninth New Collegiate Dictionary). This claimed

dependency between the liveness component and the registry component is not described, taught

or suggested in Wipfel. Further, it is not inherent in Wipfel.

For instance, the description in Wipfel in which one node probes another node (referred

to by the Examiner as a liveness component) is described with reference to FIGs. 3-5. During

this entire discussion of probing, the registry of FIG. 6 is not even mentioned. Instead, other structures are employed. Since other structures are employed and the registry need not be employed, appellants respectfully submit that a dependency between the liveness component and the registry component, as claimed by appellants, does not <u>necessarily</u> flow from the teachings of Wipfel. The missing descriptive material (i.e., the dependency between the liveness component and the registry) is not "necessarily present" in Wipfel. Thus, Wipfel does not anticipate appellants' claimed invention under inherency.

Appellants note that further on in the discussion of Wipfel that Wipfel states: "A node status 618 field may contain status and diagnostic information of the type discussed in connection with FIGs. 3 through 5." Further, it states that memory probes may be performed on structure 600. However, the optional nature of these statements does not describe a dependency, as claimed by appellants. Moreover, since the registry is not needed, it cannot be said that the missing dependency necessarily flows from the cited reference.

Based on the foregoing, appellants respectfully submit that the liveness component of Wipfel is not dependent on the registry of Wipfel, since the registry is not even necessarily used in the probing. Therefore, appellants respectfully submit that the specific dependencies recited by appellants are not described, taught or suggested in Wipfel, nor are they inherent in Wipfel.

For at least these reasons, appellants respectfully request reversal of the rejection of the independent claims based on Wipfel.

2.   Dependent Claims – Inherency Rejection

Appellants separately argued the patentability of various dependent claims in their Appeal Brief, dated January 18, 2005. These dependent claims explicitly recite elements that appellants submit are missing from the cited reference, Wipfel.

In response to Appellants' Appeal Brief, the Examiner's Answer alleges that the explicit features being claimed are inherent in Wipfel. Appellants respectfully disagree.

Again, as is well known and as cited above, in order for a claimed feature to be inherent, it must necessarily flow from the teachings of the applied art. The missing descriptive matter must necessarily be present in the cited reference. Appellants respectfully submit that the

features being claimed in at least the separately argued dependent claims do not necessarily flow from and are not necessarily present in Wipfel.

For example, in dependent claims 21, 45 and 69, appellants explicitly claim that the configuration component is responsible for starting the registry component, the liveness component, the group services component and the resource management component in a defined order that includes starting the registry component, and then the liveness component, the group services component and the resource management component. This claimed defined starting order is not described, taught or suggested in Wipfel. Further, it is not inherent in Wipfel.

It is stated in the Examiner's Answer that the registry component must be started first in Wipfel. Appellants respectfully disagree that this is an inherent feature of the registry of Wipfel.

The defined starting order claimed by appellants is not "necessarily present" in Wipfel. Wipfel does not address the order in which components are started, and appellants' order does not necessarily flow from Wipfel. For instance, the Examiner's Answer indicates that the registry of Wipfel must be started first. However, the registry of Wipfel is not even a necessary component in many of the functions described in Wipfel. As an example, the liveness function, indicated in the Answer as the probing function of FIG. 3, does not even reference the registry during the discussion of FIG. 3. The liveness function in various embodiments stands alone from the registry, and therefore, it does not necessarily flow that the registry function must be started before the liveness function, as claimed by appellants.

Further, the rationale provided in the Answer for inherency merely describes a possible order of processing steps (which appellants have not conceded to), and does not describe an ordering for starting the components. Those possible processing steps are not equivalent to the order in which components are started, which is the aspect being claimed by appellants. Wipfel does not address the order in which the registry or other components must be started and the starting order does not necessarily flow from the teachings of Wipfel. Thus, appellants respectfully submit that their claimed starting order is not inherent in Wipfel, and respectfully request reversal of the rejection of claims 21, 45 and 69.

As a further example, dependent claims 23, 47 and 71, specifically recite that the configuration component utilizes a copy of the at least one copy of global configuration database

determined to be used in the starting to verify data, and then continues with starting the liveness component, the group services component and the resource management component. This claimed feature is not described, taught or suggested in Wipfel. Further, it is not inherent in Wipfel.

There is no description in Wipfel of such elements, and such elements do not necessarily flow from Wipfel. It is stated in the Examiner's Answer that: "Wipfel clearly teaches that each node to 'coordinate their actions' and to 'maintain a persistent store of diagnostic information' (see col. 14, lines 46-60) utilizes the global configuration database. Furthermore, it is inherent that such information is also utilized for the start of the components." However, there is no indication in the Examiner's Answer of where the claimed elements are taught in Wipfel, nor is there a basis in fact and/or technical reasoning provided in the Answer to reasonably support the determination that appellants' claimed features are inherent in Wipfel. For instance, the claimed features of determining the global data to be used, using the global data in verification, and then continuing with the starting of the various components is not even addressed in the Examiner's Answer.

There is no indication of how the explicitly claimed features described above would naturally flow from Wipfel. Further, appellants respectfully submit that the missing material is not necessarily present in Wipfel. Thus, appellants respectfully request reversal of the rejection of claims 23, 47 and 71 based on Wipfel.

The other separately argued dependent claims (e.g., claims 22, 46 and 70; 24, 48 and 72; 25, 49 and 73) are patentable for similar reasons described above. Again, appellants respectfully submit that there is no basis in fact and/or technical reasoning provided in the Examiner's Answer to reasonably support the determination that the specific claimed features necessarily flow from the teachings of Wipfel. Appellants respectfully submit that particular features of appellants' dependent claims are not even addressed in the Answer or they are glossed over. Further, appellants respectfully submit that the missing descriptive material is not necessarily present in Wipfel, and thus, appellants' claimed invention is not inherent.

For instance, dependent claims 25, 49, and 73 specifically recite a second phase of initialization of the registry, when the second phase is to begin and what happens during the

second phase. One or more of these features are not even addressed in the Examiner's Answer (e.g., registry component begins a second phase of initialization, in response to the group services component completing initialization). Thus, the Examiner's Answer does not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic flows from Wipfel. Moreover, appellants respectfully submit that the missing descriptive material is not necessarily present in Wipfel.

For at least the above reasons, appellants respectfully request reversal of the rejection of claims 25, 49 and 73 based on Wipfel. Appellants respectfully submit that their invention, as claimed, is not described, taught or suggested in Wipfel nor is it inherent, for at least the reasons above.

For similar reasons, appellants also respectfully request reversal of the other dependent claims based on Wipfel.

3.   Dependent Claim 76

Dependent claim 76 is rejected under 35 U.S.C. 103 as being obvious over the combination of Wipfel and Thorbjornsen. In Appellants' Brief, it was argued that dependent claim 76 is patentable over the combination, since the combination is improper in that: there is no teaching or suggestion in the references themselves to make the combination; the justification of the combination appears to be hindsight reconstruction of appellants' invention; Wipfel teaches away from the combination; the modifications of Wipfel to have a shared nothing environment would destroy the intended function of Wipfel that specifically teaches the use of shared resources; and that one of ordinary skill in the art would not combine the teachings of vastly different environments to solve a problem of one environment.

In reply to appellants' arguments, the Examiner's Answer states:

> In this case, Thorbjornsen's teaching that within a shared nothing
> architecture, the nodes are divided into groups because this
> provides multi-fault tolerance and fault masking (see page 6, lines
> 24-31), is sufficient motivation to combine. Without the
> combination of Thorbjornsen, the system of Wipfel would result in
> corrupt and unreliable shared data.

Appellants respectfully submit that in addition to the above summarily stated arguments that the combination of Wipfel and Thorbjornsen is improper, which are further developed in Appellants' Brief, appellants respectfully submit that the above reasoning stated in the Examiner's Answer further supports appellants' contention that the combination is improper. Based on the above reasoning, Wipfel is inoperable without Thorbjornsen. Thus, under this reasoning Wipfel is invalid art and should be removed as a reference. As such, the §102 rejection and the §103 rejection should be reversed.

It is further stated in the Examiner's Answer: "Furthermore, if the Thorbjornsen is not combinable with the teachings of Wipfel, then clearly the dependent claim 76 is rejectable under 112, 2nd for at least the same reasons." Appellants respectfully request that if claim 76 is being rejected under §112, second paragraph, that the particular aspects of the claim being rejected and the reasoning for those rejections be specifically provided.

For at least the above reasons, appellants respectfully submit that claim 76 is patentable over the combination of Wipfel and Thorbjornsen.

Conclusion

Based on the foregoing, appellants respectfully submit that all pending claims are patentable over Wipfel, either alone or in combination with Thorbjornsen, and respectfully request reversal of the rejections to the claims.

Respectfully submitted,

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Dated: June 27, 2005

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